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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,786	11/10/2001	Frederick Lee Kitson	10005870-1	3208

7590 11/04/2004

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER	
LE, VU	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/052,786	KITSON ET AL.	
	Examiner	Art Unit	
	Vu Le	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-23 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-23 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11-10-01.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 9-10, 12-16, 17, 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geiger, US 5,420,828 in view of Cannon, US 6,028,625.

Re claim 1, Geiger discloses an imaging system for a user (figs. 7-8), comprising:

a mask (11) adapted to be worn by a user which covers at least the eyes of said user and has a viewing area covered by a faceplate (col. 7, lines 23-47);

an imaging subsystem mounted in fixed relation to said mask adjacent said faceplate, said imaging subsystem adapted to capture images positioned in the viewing area covered by said faceplate (10, col. 6, line 47 – col. 8, line 48).

Geiger teaches real-time imaging for use in scuba diving in which video signals are transmitted wirelessly in close proximity from one diver to another for instantaneous viewing (col. 12, lines 13-53). Geiger however, fails to disclose an image storage system positioned outside said mask capable of storing said images, said image storage system being in close proximity to said user and operatively connected to said imaging subsystem by wireless communication as claimed.

Cannon shows that it's well known and used to have image storage in a helmet mounted video system (figs. 2a-2b, fig. 4).

Taking the combined teaching of Geiger and Cannon as a whole, it would have been obvious to modify Geiger to include an image storage in a helmet mounted video system for scuba diving for the benefit of non real-time viewing if such application is desirable.

Re claim 2, the imaging system as claimed in claim 1 wherein said mask is a diving mask (Geiger, figs 7-8, col. 12, lines 13-31).

Re claim 3, the imaging system as claimed in claim 1 wherein said image subsystem is adapted to follow head movements of said user (Geiger, figs. 7-8, in Geiger, the camera 52 is mounted onto the helmet 11, thus, the camera will follow the head movements of said user).

Re claim 4, the imaging system as claimed in claim 1 wherein said imaging subsystem includes a camera capable of capturing images using imaging techniques selecting from the group consisting of analog, digital, infrared, laser, and a combination of said imaging techniques (Geiger, col. 4, line 67 – col. 5, line 3).

Re claim 5, the imaging system as claimed in claim 4 wherein said imaging subsystem includes a camera selected from the group consisting of video camera and still-picture camera.

(Geiger discloses a television camera, col. 4, line 67 – col. 5, line 3, col. 12, lines 1-3, but does not prescribe a still-picture camera. However, Official Notice is taken to note that still-picture camera for underwater application is well known and used in the art and would have been obvious and beneficial to use as an alternative to video camera if still images for record keeping are desirable).

Re claim 9, the imaging system as claimed in claim 1 wherein: said imaging subsystem includes a wireless transmitter for transmitting said images to said image storage system by wireless communication, and said image storage system includes a wireless receiver capable of receiving said images from said imaging subsystem by wireless communication.

(Claim 9 has been analyzed and rejected w/r to claim 1).

Re claim 10, the imaging system as claimed in claim 9 wherein said image storage system includes a video compression unit operatively connected to said wireless receiver and capable of compressing said images into compressed images, and an image storage subsystem operatively connected to said video compression unit and capable of storing said compressed images.

(Official Notice is taken to note that video compression is notoriously well known and used for storing image files and thus would have been beneficial to use here).

Re claim 12, the imaging system as claimed in claim 1 wherein said image storage system is adapted for mounting on a body part of said user, mounting on equipment carried by said user, or insertion into a pocket of a buoyancy control device vest worn by said user.

(The system of Geiger in view of Cannon is capable of mounting an image storage system on a body part of a diver).

Re claim 13, the imaging system as claimed in claim 1 wherein said imaging system further comprises: a first power supply that provides power to said image

storage system, and a second power supply distinct from said first power supply, that provides power to said imaging subsystem.

(Geiger discloses a battery pack as a source-see col. 10, line 23. The system of Geiger in view of Cannon would have necessitated a power supply to the imaging subsystem and to the storage subsystem. Whether the power supply is a single source for both subsystems or separate is immaterial and would have been obvious by design).

Re claim 14, the imaging system as claimed in claim 13 wherein: said first power supply includes a first solar device for generating solar power.

(Official Notice is taken to note that it's notoriously well known and used to rely on solar power as an alternative renewal source of power. In the instant case, the system of Geiger in view of Cannon has the capability of using solar power for the benefit of a renewable source of energy).

Re claim 15, the imaging system as claimed in claim 1 further including a liquid crystal display (LCD) mounted inside said mask and in fixed relation to said faceplate, said LCD capable of displaying said images for viewing by said user (Geiger, col. 10, lines 22-30).

Re claim 16, the imaging system as claimed in claim 1 further including a fisheye lens mounted in front of said imaging subsystem, wherein said imaging subsystem is adapted to capture fisheye images using said fisheye lens.

(Official Notice is taken to note that fisheye lens for use in video imaging is notoriously well known and used for the benefit of wide angle view and thus, would have

been obvious to mount in front of the video camera in Geiger for the benefit of wide angle video imaging).

Re claim 18, a method for wireless imaging, comprising: providing a mask adapted to be worn by a user which covers at least the eyes of said user and has a viewing area covered by a faceplate, capturing images positioned in front of said faceplate using an imaging subsystem, and transmitting by wireless communication said images to an image storage system capable of storing said images, said image storage system being positioned outside said mask and in close proximity to said user.

(Claim 18 has been analyzed and rejected w/r to claim 1).

Re claim 19, the method as claimed in claim 18 wherein transmitting by wireless communication said images to an image storage system includes transmitting said images to a wireless receiver associated with the image storage system, compressing said images into compressed images using a video compression unit operatively connected to said wireless receiver, and storing said compressed images using said image storage subsystem.

(Claim 19 has been analyzed and rejected w/r to claims 1, 9-10).

Re claim 20, the method as claimed in claim 19 wherein storing said images using an image storage subsystem includes storing images using a solid state memory system.

(Official Notice is taken to note that solid state memory is notoriously well known and used because it is small, lightweight and transportable, and would have been obvious and beneficial to used for underwater video imaging system of Geiger).

Re claim 21, the method as claimed in claim 18 further comprising storing images in a storage device adapted for location within a pocket of a buoyancy control device worn by the user.

(Claim 21 has been analyzed and rejected w/r to claim 12).

Re claim 22, the method as claimed in claim 18 further including displaying said images on a liquid crystal display (LCD) for viewing by said user, wherein said LCD is mounted inside said mask and in fixed relation to said faceplate.

(Claim 22 has been analyzed and rejected w/r to claim 15. See also Geiger, fig. 10, col. 11, lines 13-68).

Claim 17 and 23 have been analyzed and rejected w/r to claims 1-4, 9, 18 and 20.

3. Claims 6-8, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Geiger, US 5,420,828 in view of Cannon, US 6,028,625 as applied to claim 1 above, and further in view of Jones, US 3,892,234 and Cochran, US 5,899,204.

Re claim 6, Geiger discloses a video camera as part of the imaging subsystem (fig. 7: 52, col. 12, lines 1-10), and wireless transmission of video signals (col. 12, lines 13-53). Geiger fails to make explicit a control unit adapted to control said imaging subsystem using wireless communication, said imaging subsystem control unit adapted to be mounted on a body part of said user, mounted on equipment carried by said user, or integrated with equipment carried by said user; and said imaging subsystem control unit includes a control switch adapted to perform one of starting video image capture and taking a still-picture.

Jones discloses a video camera attached to a diver's helmet (figs. 2-5, col. 4, lines 1-36), inter alia, wherein manual switches (48-49) which may be located at the hand of the diver by passing through his diving suit, or may be located on his body immediately adjacent to his head to commence "on/off" operations. Furthermore, a wrist-mounted dive computer serves as a control unit is well known and used in the art as evidenced by Cochran (figs. 1-2, col. 3, lines 55-67).

Therefore, taking the combined teaching of Geiger, Jones and Cochran as a whole, it would have been obvious to incorporate in Geiger a camera "on/off" control switch positioned at the hand or near the helmet of a diver as taught in Jones, or modify the control switch into a wrist-mounted dive computer as taught in Cochran to serve as a control unit for commencing "on/off" operations of the video camera, inter alia. Control communication may be wireless since Geiger has utilized wireless communications for transmitting video. The benefit of such modification would enable the diver to easily operate the camera without much distractions, and have it readily mounted onto the wrist or the body as taught in Jones and Cochran.

Claims 7-8 have been analyzed and rejected w/r to claim 6 above.

Re claim 11, Geiger in view of Cannon and further in view of Jones and Cochran would have rendered it obvious to have wrist-mounted or body-mounted control unit to operate the imaging subsystem wirelessly (see discussion in claim 6 above). Although the combined teaching fails to explicitly disclose "...wherein said imaging subsystem includes a second wireless receiver, and said image storage system includes second wireless transmitter capable of transmitting control signals to said second wireless

receiver by wireless communication, said control signals including a first signal to turn said imaging subsystem on and off and a second signal to start and end an video image processing or take a still-picture" as claimed, it is viewed that wireless control communication in the modified system as discussed in claim 6 above would have necessitated wireless receiver/transmitter for communications. Therefore, such wireless receiver/transmitter as claimed would have been obvious in view of the combined teaching of Geiger, Cannon, Jones and Cochran.

Contact

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is 703-308-6613. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vu Le
Primary Examiner
AU 2613
(703) 308-6613
Vu.Le@uspto.gov